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Laparoscopic Pelvic Sidewall Dissection with Combined Resection of Internal Iliac Vessels for Local Recurrence of Rectal Cancer

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Abstract

Background: Pelvic sidewall dissection with combined resection of the internal iliac vessels (IIVs) is an important procedure that is sometimes required in advanced pelvis surgery¹⁻³. However, it is a technically demanding procedure because of the complex anatomy of the IIVs, especially the iliac vein, in relation to the surrounding structures. Here, we demonstrate our method of laparoscopic pelvic sidewall dissection combined with resection of IIVs.

Methods: We present a video of laparoscopic pelvic sidewall dissection with combined resection of IIVs for recurrent rectal cancer following laparoscopic abdomino-perineal resection (APR). The patient was a 66-year-old man with a BMI of 23.5. He had local recurrence of rectal cancer at the left pelvic sidewall. Five ports were used (Figure 1). After the isolation of the ureter, dissection along the pelvic sidewall was started. Then, the anterior compartment containing the obturator nodes was dissected from the lateral side of vesicohypogastric fascia^{4,5}. A dissectible layer between the pedicle of the IIVs and the sciatic plexus/piriformis muscle was entered from the lateral side and IIVs were mobilized toward the midline. Sufficient mobilization of the IIVs facilitates safe isolation and division of the IIVs while avoiding injury to the sacral nerves posteriorly. The neurovascular bundle was divided at the side of the prostate, and lastly, the inferior gluteal and pudendal vessels were divided at the inferior sciatic foramen using an endoscopic linear stapler and the specimen was extracted.

Results: We performed three cases (one male and two female) of pelvic sidewall dissection with combined resection of IIVs for local recurrence of rectal cancer. One patient underwent combined APR resection of the rectum. No patient had a medical comorbidity. Median (range) values for age, BMI, operative time, and intraoperative blood loss in this series were 67 (51–69) years, 22.1 (20.1–23.5), 322 (294–614) min, and 92 (0–152) g, respectively. Pathological examination revealed metastatic adenocarcinoma without margin involvement. There was no mortality and no major (\geq Grade 3) intraoperative or postoperative complications. No patient had motor or

urinary dysfunction. Two patients had recurrence (liver and peritoneal).

Conclusions: We demonstrated our procedure of laparoscopic pelvic sidewall dissection combined with resection of IIVs. This is a safe and effective procedure and is applicable to advanced laparoscopic pelvic surgery.

Conflict of Interest: None

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Figure 1

